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THE *LEGATUM* INITIATIVE AND DIGITAL PRESERVATION OF AUDIOVISUAL PUBLIC ARCHIVES

A INICIATIVA *LEGATUM* E A PRESERVAÇÃO DIGITAL DE ARQUIVOS AUDIOVISUAIS PÚBLICOS

LA INICIATIVA *LEGATUM* Y LA PRESERVACIÓN DIGITAL DE ARCHIVOS AUDIOVISUALES PÚBLICOS

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ABSTRACT

It presents some partial results of a scientific research on digital preservation of public audiovisual archives, whose primary product is an open, multilingual, collaborative repository model – *Legatum* – based on a digital platform compatible with international archival standards. Still in development, this initiative consists of a series of coordinated actions around a digital repository for storage and remote access to born digital objects or digitized ones, from analog audiovisual collections of public institutions in Brazil and other countries of Latin languages

KEYWORDS: Audiovisual Heritage. Audiovisual Safeguarding. Audiovisual Preservation. Digital Preservation. Digital Repository.

RESUMO

Apresenta o percurso e os resultados parciais de pesquisa científica sobre preservação digital de arquivos audiovisuais públicos, cujo principal produto é um modelo de repositório aberto, multi-idiomas e colaborativo - *Legatum* – baseado em uma plataforma digital em conformidade com normas arquivísticas. Ainda em desenvolvimento, esta iniciativa constitui-se em uma série de ações coordenadas ao redor de um repositório digital para o armazenamento e acesso remoto a objetos nascidos digitais ou digitalizados a partir de acervos analógicos audiovisuais públicos de instituições brasileiras e de outros países de idiomas de origem latina.

PALAVRAS-CHAVE: Patrimônio audiovisual. Salvaguarda. Preservação audiovisual. Preservação digital. Repositório digital.

RESUMEN

Presenta la ruta y los resultados parciales de la investigación científica sobre preservación digital de archivos audiovisuales públicos, cuyo principal producto es un modelo de repositorio abierto, multi-idiomas y colaborativo – *Legatum* – basado en una plataforma digital de acuerdo con las normas archivísticas. Todavía en

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desarrollo, esta iniciativa consiste en una serie de acciones coordinadas al derredor de un repositorio digital para el almacenamiento y acceso remoto a objetos nacidos digitales o digitalizados nacidos a partir de colecciones audiovisuales analógicos públicos de instituciones en Brasil y otros países de lenguas de origen latino.

PALABRAS CLAVE: Patrimonio audiovisual. Salvaguardia. Preservación audiovisual. Preservación digital. Repositorio digital

1 INTRODUCTION

> *Without testament or, to resolve the metaphor, without tradition - which selects and names, which hands down and preserves, which indicates where the treasures are and what their worth is - there seems to be no willed continuity in time and hence, humanly speaking, neither past nor future (...).*
>
> *(Hannah Arendt, 2005, p.3)*

This Hannah Arendt passage inspires the idea that there will be a gap in the social memory as a result of the use of digital technologies for the production of contemporary information, whether written or audiovisual. The assumption is that, to minimize it, it is necessary to recreate a tradition in the Archival Studies that allows a "willed continuity in time" through scientific research for the development of solutions that will ensure the safety of the contemporary digital legacy for future generations.

In the contemporary audiovisual context, videos, audio, movies and correlated documentation have been produced almost entirely digitally. This information encoded in bits and bytes was *deterritorialized* of its analog supports, fluidly establishing the processes of creation, distribution and fruition of content, almost ubiquitously present in all spheres of society. This digitization of society has created new spaces, times and movements that will demand new action strategies to manage and maintain such digital information usable and understandable for as long as possible.

For Lévy,

> knowledge and information are not immaterial, but, deterritorialized; far from being stuck to a privileged support, it can travel. But information and knowledge are not material either. The alternative of material and immaterial works only for substances, things, whereas that information and knowledge are of the event or process order. (1996, p.56, translated by the Authors)

Levy reinforces the information concept that we use in the context of this article and of the research actions of the CRIDI (Digital Culture, Representation and Information) Group, which stems from the understanding that access to information enables the "extension of consciousness" (SILVA 2002, 2006 and SZABÓ, 2006; 2007; 2007a) of the individual or society, which become capable of acting in the world and for it.

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This understanding has its origins in the concept from our original theory (SILVA 2002) which proposes that the information be seen as an enabler process for the expansion of consciousness related to the recognition of its own existence and ability to know and act in a specific social context, that is to develop knowledge aimed at transforming society. We refer to this consciousness as informational consciousness[5]. Indeed, it was from this theory that came the motivation for the research developed within the CRIDI Group, which, recognizing the inadequacy or absence of digital safeguard policies, is committed at this research stage to make available to institutions of Latin American countries an archival digital repository that is being developed by CRIDI, with funding and support from CNPq and the Federal University of Bahia (Brazil).

Retaking the conceptual issues related to the term information, we want to determine that we do not think of the information simply as a representation of symbols recorded in media, but as a process of consciousness expansion, with all their meanings that make possible to guide and instruct social processes, whatever those may be. It is from this approach, materialist dialectic, that we have conducted the research developed in our research group. It is important to highlight that these understandings and approaches have been conducted for decades by the Information Science (CI) field.

Thus, in this case, we consider that information, once "*deterritorialized*" of its analog supports, by the use of digital technologies in the archival field, allows to think of the symbols and its meanings as informational content "*liberated*" from its analog medium, such as tape or film. It is important to highlight that this technological event, which inaugurates what some authors (CASTELLS, 1999; MATELLART, 2002) call "*information society*", has allowed, in the archival field, to expand the simultaneous access of digital informational content to all those who seek fruition, study or research, either as evidence or information.

On the volume of digital information currently being produced, it is estimated that it grows a tenfold every five years. In 2010, the volume was around five exabytes[6] of digital information produced, which corresponds approximately to almost fifty exabytes in 2015, or the equivalent of 500,000 Librar*ies* of Congress (LOC), which is the largest library in the world.

This digital born information flows in increasingly fast and ephemeral networks. To preserve these structures, at least in part, in terms of content and technological ambience, remains as one of the biggest challenges that professional archivists must face. The technological context, where information travels, is constantly changed by a market that's avid for launching new generations of equipment and software which ultimately become

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[5] We will not dive here into the conceptual framework that has shaped the information theory proposed as a doctoral thesis in 2002, presented to the School of Communication of the Federal University of Rio de Janeiro (ECO-UFRJ), in partnership with the Brazilian Institute of information in Science and Technology, of the Ministry of Science, Technology and Innovation (MCTI-IBICT). See Silva, 2002.

[6] 1 Exabyte = 10^{18} bytes Cf. http://techcrunch.com/2010/08/04/schmidt-data/ Access in: May 6, 2012.

incompatible with those that preceded them. Digital information, when being generated, needs to follow a certain set of rules, requirements and standards so its preservation and continued access can be achieved by the maximum possible time.

When reflecting on the current audiovisual production in Brazil, it is observed that, almost in its entirety, it has been generated digitally without necessarily meeting the minimum requirements needed for its preservation and, moreover, there is an absence of public policies aimed at digital safeguarding, despite efforts undertaken by IBICT, the CTDE and the National Archives of Brazil which aim to create trusted digital repositories, in accordance with the current rules and standards.

For this reason, we see the academic and intellectual reflection and the operational technical actions directed to the issues of safeguard and continued access to digital born representatives or scanned from audiovisual documentary items, as fundamental. This is because we believe that spreading the audiovisual heritage kept by public institutions is an important step to achieve a new paradigm of relations and correlations among the audiovisual documentation custodial institutions and their users, producers, directors, researchers, students and the interested public in general.

This article was structured as it follows: this Introduction contextualizes the research problem and the motivations that led the CRIDI Group to develop its research actions that will be detailed in the following sections, in addition to a brief explanation of the information concept used. In the following sections, we present the research route of the CRIDI Group[7]; then, we briefly trace the methodological approach (episteme) and theoretical basis guiding the research. Finally, we share the results already achieved and the actions now being executed.

2 RESEARCH BACKGROUND

In 2005, CRIDI initiated the research project "The digital conversion of public collections' special documents and the informational consciousness: technical and theoretical aspects in the Information Science context."[8] This initial phase of the project allowed collecting data on photographic, audio and audiovisual public collections in 109 public institutions in Salvador city, but among these institutions only 35 kept audiovisual documentation.[9]

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[7] See <http://www.cridi.ufba.br>. Access in: Sep. 24, 2016
[8] See <http://www.cridi.ici.ufba.br/?page_id=25>. Access in: Sep. 24, 2016
[9] In that first phase of the project we had financial support from UFBA, the State of Bahia Research Support Foundation (FAPESB) and the National Council for Scientific and Technological Development of the Ministry of Science, Technology and Innovation (CNPq-MCTI), through nine Scientific Initiation Scholarships, lasting 12 months each, of the Institutional Scientific Initiation Scholarships Program (PIBIC), distributed over the three years of research to undergraduate students in Archivology.

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In 2007, near completing the research's first phase, we participated as co-organizers but also as students in the first course organized by ICCROM - International Centre for the Study for Preservation and Restoration of Cultural Property, in the city of Rio de Janeiro, on the issue of audiovisual safeguarding: SOIMA - Safeguarding Sound and Image Collections[10]. From this experience, we motioned a series of actions in the academic context of Information Science and Archivology at Federal University of Bahia, whose previous curriculum did not provide any components relating to audiovisual heritage.

Thus, in 2008, we created the course "Introduction to safeguarding sound files and moving images", as part of the class "Information Structures and Languages II", of the Information Science Post-Graduation Program (PPGCI-UFBA). A year later, we created the elective course "Organization and Preservation of Audiovisual and Sound Collections", under the Archival under graduation course (ICI-UFBA). In 2012, the first course, created in 2008, became an effective elective course, called "Sound and Moving Image Archives", which starts to have its educational content offered in Moodle, by the very UFBA. The goals of these initiatives is to meet the demands of teaching, research and extension of the class.

Considering the need to disseminate and strengthen this issue as much as possible and bring it to reflection on the Archival and Information Science fields[11], CRIDI has participated in many events, courses and training, national and international ones.

In 2013, we began the second phase of the research (2013-2016), now exclusively limited to audiovisual collections, through the project "Challenges and digital alternatives to the safeguarding and dissemination of public audiovisual archival documentary heritage."[12] In 2015, therefore ten years later, the Salvador collected data is being updated, which has allowed us to realize the preservation state of the audiovisual collection of the institutions that

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[10] This experience originated an article called *Toward a Curricular Structure.* Cf. http://soima.iccrom.org/brazil-education/. Access in: Sep. 24, 2016.

[11] In 2013, we presented several written communications in major Brazilian events on the Archival and Information Science fields, as well as other related areas. Those were, for instance: CINFORM – Encontro Nacional de Ensino e Pesquisa em Informação (SILVA, 2013a); ENECULT – Encontro de Estudos Multidisciplinares em Cultura (SILVA, 2013e); SBA – Simpósio Baiano de Arquivologia (SILVA, 2013b), CTCM – Conferência sobre Tecnologia, Cultura e Memória (SILVA, 2013f); and published articles in two leading scientific journals in the IS area (SILVA, 2013c, 2013d). In 2014, we made speeches in SINPRED – I Seminário Internacional de Preservação Digital (SILVA, 2014a), and present the progress of our research in the Mesa Internacional de Abertura do 9ª CineOP – Mostra de Cinema de Ouro Preto/9º Encontro de Arquivos Nacionais e Acervos Audiovisuais Brasileiros (SILVA, 2014b).

[12] In this second phase of the research we already got support from UFBA, FAPESB and CNPq for 13 PIBIC scholarships so far (May, 2016), for undergraduate students in Archival Science, Library Science, Law, History and Humanities; one CNPq-IC three-year scholarship for an undergraduate student in Library Science; a CNPq Higher Education Technical Support fellowship (CNPQ-AT-NS), lasting three-years, for a professional web designer and internet systems; and a three-years Research Productivity fellowship (CNPq-PQ2), for the project coordination. The project also received a small complement of R$ 7,500.00 (seven thousand five hundred reais) in Universal Call Notice (CNPq). In total, the resources for this second phase of the project have reached approximately R$ 187,000.00 (one hundred eighty seven thousand reais).

responded to the questionnaire to make comparative analyzes that are enabling us to know the evolution, involution or stagnation of these institutions' preservation. Thus, we intend to infer and evaluate the commitment level of the city of Salvador's public decision-making spheres on the safeguarding of audiovisual collections. In this second phase of the research, other institutions in the very city of Salvador, eight Brazilian states and the Federal District, also joined the project, which already had the initial participation of 35 institutions[13]. In total, we collected data from sixty-five institutions/sectors/organizations that have a significant representation in the country's audiovisual heritage field.

The questionnaire taken to the audiovisual collections' managers sought to identify: 1) themes that characterize the collections; 2) Existing formats and supports; 3) Tools used to control collection consultations; 4) Services and equipment offered to users; 5) Indication of priorities for a first digital conversion action; 6) The technical expertise of the teams, regarding the treatment of original (analog) collections and motion image collections scanning; 7) Available equipment in the audiovisual documentation sectors; 8) Existence of internal regulations, preservation policies and disaster plans for the safeguarding of the institution images; 9) Previous digitization experience with moving image collections, as well as with the formation of teams and eventual consultants hired for this purpose; 10) The origin of such experience's financial and materials resources; 11) The existence of technical reports of moving image digital conversion experiments eventually done; 12) predominant aspects of the decision-making process on what to scan in each institution, as well as if the scanning operations were carried out internally or were hired externally; 13) Technical aspects of the digitization process.[14]

The aim of this data collection was to know why, how and what has been done in terms of digitization of analog audiovisual collections and to identify relevant information to extract data from these experiences. Also, to gather elements of improvement aiming at collaborative actions that result in the use of a common online environment of preservation and digital access to existing audiovisual collections. All these institutions/sectors/partner organizations in the development of the research will benefit from it in the future, not only getting greater visibility through the dissemination of their collections in the CRIDI Group website, but also previously receiving the data to establish correlations and comparisons, as well as new interinstitutional relations. Most importantly, they will be identified as first-time partners in the development of the Legatum environment, which we are already using to

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[13] Besides Bahia, we collected data in institutions from Brasilia (Federal District) and the states of Espírito Santo, Goiás, Minas Gerais, Paraná, Pernambuco, Rio de Janeiro, Rio Grande do Sul and São Paulo. See in the <PROJETOS> tab in <http://www.cridi.ici.ufba.br> links to the websites of institutions/sectors/organizations collaborating with the project.

[14] Referring to file names, metadata, quality requirements, equipment used, calibration frequency, generated versions and formats of the same converted item, storage, best practice guides and national and international standards adopted, eventually produced safekeeping regulations, access policies.

experience actions of description, access and archival preservation of audiovisual digital files of their collections.

Still on this phase of the research, initially the project limited the data collection to public institutions, but after our 2014 participation in the 9th CineOP - Ouro Preto Cinema Exhibit[15], "a forum dedicated to audiovisual preservation in dialogue with education and in exchange with the world" (D'ANGELO and D'ANGELO, 2014, p.3, translated by the Authors), we decided to broaden our scope. During the National Meetings of Brazilian Audiovisual Collections and Archives that happen within this forum, and which gather the most important institutions and organizations in the country, we realized the importance of also including private entities that showed interest in collaborating with our project.

Three major organizations started then to collaborate with our project answering the questionnaire: Cinemateca do Museu de Arte Moderna, Rio de Janeiro; Centro de Documentação da Rede Globo de Televisão, do Estado do Rio Grande do Sul, and the Instituto Goiano de Pré-História e Antropologia, Pontifícia Universidade Católica, Goiás.

3 METHODOLOGIC FUNDAMENTS

Our research relates to the evolution/overcoming of an analog model to a digital one. The assumption is that this is an important paradigm shift represented by the analog/digital binomial, which is presented as irreversible in society and even in the human relationship with nature.

The materialist dialectic approach aforementioned favors the observation and analysis of overcoming and transformation movements. Dialectic is a posture, a worldview, but also a method of research and analysis that allows for an understanding of reality. This approach, aimed at both the whole and its parts, and presenting itself at same time as analysis and synthesis, always carries a jolt directed to any hard knowledge: in the internal causes of its development are the reasons for change (BRUYNE; HERMAN; SCHOUTHEETE, 1977).

When reflecting and investigating the issues involved in the research issue and digitization processes, we understand these should not be analyzed as fixed objects, but as a dynamic process, in movement and constantly changing: the end of a process starts another one. The *challenges and digital alternatives to the safeguarding and dissemination of public audiovisual archival documentary heritage*, research object of the research's stage 2 of 3, undoubtedly meet "a new form that suppresses and contains, at the same time, the primitive properties." So one may ask: What changes come from the documents digitization? To

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[15] See http://www.universoproducao.com.br/cineop/9cineop/ . Access in: Sep 24, 2016

answer it, we must go beyond the technical aspects, that is, it will "be necessary to inquire about the historical, social, political and technical sense of the research."[16]

Regarding the need to progress in the research in order to study factors that interfere in the decisions as to what, why and how to digitize, the results should not be restricted to a particular situation under study and therefore should be generalizable. It is then necessary to provide new knowledge about a phenomenon (use of digital technologies) or a field (audiovisual preservation) to relate it to what is already known *a priori*.

For the research development, we adopted the procedures of historiographical, statistical, quantitative, qualitative, infographic and especially comparative methods, as well as of action research along with specific data collection techniques. In action research, the institutions' own members wanting organizational or procedural changes should participate in the definition and establishment of the new models they demand, which will eventually enforce changes in the group procedures as a whole.

Throughout the research process, we felt the need to know the contexts of the collections production and reception. In other words, we sought to understand the current and desired situations of moving images and the demands and consultation and access necessities to this type of collection. Therefore, we have come to adopt in our data collection indirect documentation techniques for bibliographic research and internet browsing, and direct documentation, through intensive observation (seeing documents, contacting members of institutions, examining facts and phenomena) and extensive observation (printed questionnaire, online forms, tests).

4 THEORETICAL BASIS

Our point of view is not the subject as an extension of the object, but the subject as action, social and historical being, since it is he whom, "although determined by economic, political and cultural contexts, is the creator of the social reality and the transformer of these contexts "(GAMBOA, 1989, p. 103, translated by the Authors).

The fundamental category we want to visualize is the totality and not the law. Our theoretical and methodological perspectives take the understanding regarding the informational process from the perspective of a Marxian theory of consciousness. We understand that what matters is to support the expansion of consciousness, using for this in the informational process, the possibility of expanding digital access to audiovisual archival documents.

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[16] See Marconi and Lakatos (2003, p. 102), and Frigoto (1989, p. 79-83). Translated by the Authors.

The understanding is drafted in contrast to the comprehension on the information as an element, purpose, structure, content or physical support with symbols arranged in it. Understanding the information as a process oriented to the expansion of consciousness is a way of keeping us questioning the issues of social and intersubjective relations, placing once again the question of power, history and culture, as suggested Chauí (1999). The information is related to our own ability of existing in the world and not to a particular structure or superstructure.

Menezes (1998) asks, "what is the nature of the material object as a document, in which lies its documentary capacity, how can it be the support base for information?", or, in other words, what kind of intrinsic information the artifacts may contain, especially those of history content? The author develops his analysis arguing about the permanent transformation, to which objects are also subjected, either in its morphology, function, its meaning, be it isolated, alternated or cumulative. "The material objects have a history, a biography (...)It is not about recomposing a material scenario, but understanding the artifacts in the social interaction (...) the biography of objects introduces a new problem: the biography of people in objects" (MENEZES, 1998, p. 1-6, translated by the Authors).

Referring to the "sociological historical object category" — whose "commitments are essentially to the present, just because in it they are produced or reproduced as a category of object, and it is to the present needs they respond", and also to the "cognitive historical document category" —, the author offers relevant elements to the development of our research proposal, as for the dialectical thinking that underlies and organizes it, useful to advancing the reflection regarding the historical document/information relation, since, in considering the problem, chooses to reduce the argument to its minimum expression.

The challenge is laid, in a way, when working in the archival interface of information science: we shall seek new tracks. We try, along the project development, to argue on the importance of digital access to public audiovisual documents as an instance of consciousness expansion. We are talking about the generation of new voices that are part of the historical process, students, educators and curious, a world of subjectivity that the internet enables and forges. Leave the most accurate interpretations remain to the experts, but may it allow the subjective walking, the sailing through the networks subjectivity, as Cervantes said by the mouth of the ingenious *Fidalgo de La Mancha*: "*El camino es siempre mejor que la posada*".

5 PARCIAL RESULTS AND IMPLEMENTED ACTIONS

In this section, we present research's partial results and the actions that are underway. It is important to highlight we collected data from the collections' institutions and users. We understand that the graphics displayed here do not require explanatory comments on its contents, considering these are explicit, clear, objective and extending any more detail would result in unnecessary redundancy.

5.1 The collected data infography

Below is a data sample collected from institutions and from their holding users, our research collaborators.

5.1.1 Data from Institutions

Regarding the institutional data we collected in Phase 2 (2013-2016), recently completed, as mentioned before, we gathered data from 62 public institutions and three organizations of the private sphere, totaling 65 respondents between April 4, 2014 and June 25, 2015, but the data analysis itself began only in mid-July 2015. We emphasize that the qualitative analysis of the institutional data is yet to be completed, and so these are only presented graphically, as the analysis started recently, in the last phase of the research, the Phase 3 (2016-2019).

Below we present a chart with the names of the 65 collaborating institutions that responded to our questionnaire.

Chart 1. Institutions that answered the data collecting questionnaire

Nº	65 Answering Institutions
01	Acervo do Museu da Imagem e do Som de Belo Horizonte (antigo Acervo do Centro de Referência Audiovisual de Belo Horizonte)
02	Centro de Documentação da Fundação Padre Anchieta
03	Núcleo de Memória das Artes da Fundação Cultural do Estado da Bahia
04	Diretoria de Conservação de Documentos do Arquivo Público Mineiro
05	Subgerência de Documentação Especial do Arquivo Geral da Cidade do Rio de Janeiro
06	VídeoSaúde Distribuidora da Fundação Oswaldo Cruz do Rio de Janeiro
07	Setor de Preservação da Cinemateca Brasileira
08	Arquivo Público Municipal de Bagé - Tarcísio Taborda
09	Setor de Arquivos Audiovisuais da Fundação Gregório de Mattos
10	Arquivo Histórico Regional da Universidade de Passo Fundo
11	Fototeca do Arquivo Histórico Municipal João Spadari Adami (Caxias do Sul)
12	Biblioteca da Faculdade de Arquitetura da Universidade Federal da Bahia
13	Secretaria da TV do Senado Federal
14	Supervisão de Documentação e Disseminação de Informações da Unidade Estadual da Bahia do Instituto Brasileiro de Geografia e Estatística
15	Seção Memória da Biblioteca Universitária Reitor Macedo Costa da Universidade Federal da Bahia
16	Memorial Lindembergue Cardoso da Escola de Música da Universidade Federal da Bahia
17	Acervo Audiovisual e Documental do Instituto Goiano de Pré-História e Antropologia da Pontifícia Universidade Católica de Goiás
18	Cinemateca de Curitiba da Fundação Cultural de Curitiba
19	Seção Técnica de Audiovisual da Faculdade de Arquitetura e Urbanismo da Universidade de São Paulo
20	Centro de Documentação da TV da Universidade Federal de Minas Gerais
21	Setor de Audiovisual da Fundação Museu da Imagem e do Som do Rio de Janeiro
22	Laboratório Memória e Cinema da Escola de Belas Artes da Universidade Federal da Minas Gerais
23	TV da Universidade Federal da Bahia
24	Centro de Documentação e Memória da Cinemateca Capitólio

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25	Seção de Biblioteca, Informação e Memória do Tribunal Regional Eleitoral da Bahia
26	Memorial da Faculdade de Direito da Universidade Federal da Bahia
27	Biblioteca Djalma Ramos da Maternidade Climério de Oliveira da Universidade Federal da Bahia
28	Centro de Memória da Bahia da Fundação Pedro Calmon (não há setor específico)
29	Biblioteca do Instituto de Ciência da Informação da Universidade Federal da Bahia
30	Centro de Documentação da Fundação TV Minas Cultural e Educativa
31	Biblioteca da Faculdade de Economia da Universidade Federal da Bahia
32	Biblioteca Setorial - Escola de Medicina Veterinária e Zootecnia da Universidade Federal da Bahia
33	Núcleo de Acervo Iconográfico e Cartográfico do Arquivo Público do Estado de São Paulo
34	Núcleo de Memória da Diretoria do Audiovisual da Fundação Cultural do Estado da Bahia
35	Setor de Acervo Audiovisual do Centro Técnico Audiovisual da Secretaria do Audiovisual do Ministério da Cultura
36	Arquivo de Filmes da Cinemateca do Museu de Arte Moderna do Rio de Janeiro
37	Coordenação de Processamento e Preservação do Acervo do Arquivo Nacional
38	Divisão de Arquivos Permanentes do Arquivo Público da Cidade de Belo Horizonte
39	Setor de Audiovisual do Museu da Imagem e do Som de Campinas
40	Gerência Executiva de Acervo da Empresa Brasil de Comunicação
41	Biblioteca Setorial - Instituto de Química da Universidade Federal da Bahia
42	Setor de Braille da Biblioteca Pública do Estado da Bahia
43	Supervisão de Acervo Permanente do Arquivo Histórico de São Paulo
44	Acervo de Documentação Histórica Musical da Universidade Federal da Bahia
45	Instituto Memória Histórica e Cultural da Universidade de Caxias do Sul
46	Biblioteca da Faculdade de Filosofia e Ciências Humanas da Universidade Federal da Bahia
47	Biblioteca do Instituto de Física da Universidade Federal da Bahia
48	Coordenação de Documentação Multimídia da Agência de Notícias do Senado Federal
49	Coordenação de Arquivo da Câmara dos Deputados
50	Centro de Estudos Baianos da Biblioteca Universitária Reitor Macedo Costa da Universidade Federal da Bahia
51	Núcleo de TV Universitária da Universidade Federal da Santa Maria
52	Cinemateca Ludovico Persice do Arquivo Público do Estado do Espírito Santo
53	Videoteca da Escola de Formação Complementar do Exército e Colégio Militar de Salvador
54	Setor de Multimeios da Biblioteca Teixeira de Freitas da Faculdade de Direito da Universidade Federal da Bahia
55	Biblioteca da Escola de Administração da Universidade Federal da Bahia
56	Memorial Denis Bernardes da Universidade Federal de Pernambuco
57	Núcleo de Audiovisual da Assessoria de Comunicação da Universidade Federal do Recôncavo da Bahia
58	Centro de Documentação do Conselho Regional de Medicina da Bahia
59	Multiteca da Faculdade de Comunicação da Universidade Federal da Bahia
60	Faculdade de Educação da Universidade Federal da Bahia (setor não identificado)
61	Biblioteca da Faculdade de Educação da Universidade Federal da Bahia
62	Centro de Memória e Informação do Museu da Imagem e do Som de São Paulo
63	Biblioteca Nelson Araújo da Escola de Teatro da Universidade Federal da Bahia
64	Secretaria Administrativa da Escola Politécnica da Universidade Federal da Bahia (não há setor específico)
65	Centro de Documentação da RBSTV-RS - Rede Globo

Source: Research authors

Following, we present graphics that represent a sample of the collected data[17] from the 65 collaborating institutions listed in Chart 1.

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[17] The consolidated and integrated dataset of all institutions can be accessed in <http://www.cridi.ici.ufba.br/respostas-2014-2015/Resumo-dados-institucionais-2014-2015.pdf>. They can also be checked by specific institution, in <http://www.cridi.ici.ufba.br/?page_id=1071>.

Figure 1 shows the existing formats/media in the investigated collections. Note that in all the different types of formats/media some institutions indicate that they do not know if such media or format exists in the collection, or yet, wouldn't know how to identify it in order to indicate whether these are available or not.
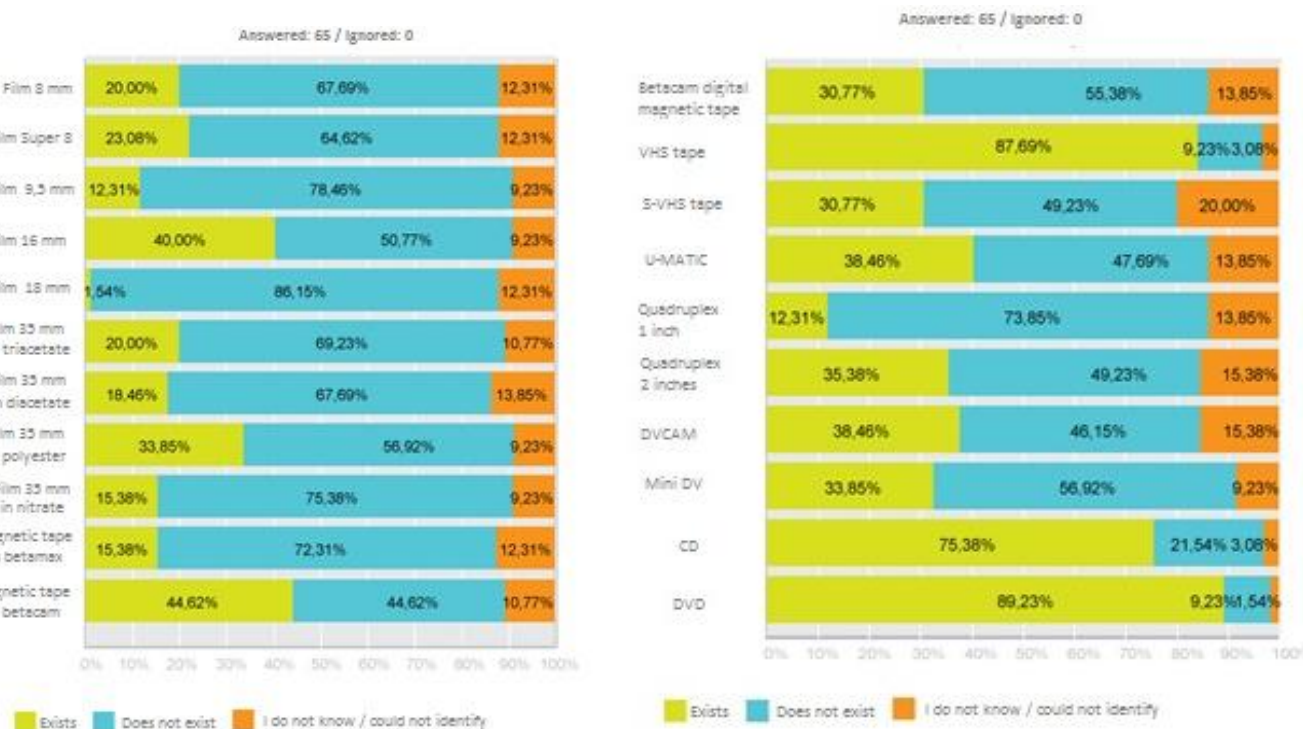

Figure 1. Moving image collections existing formats/media
Source: The Authors

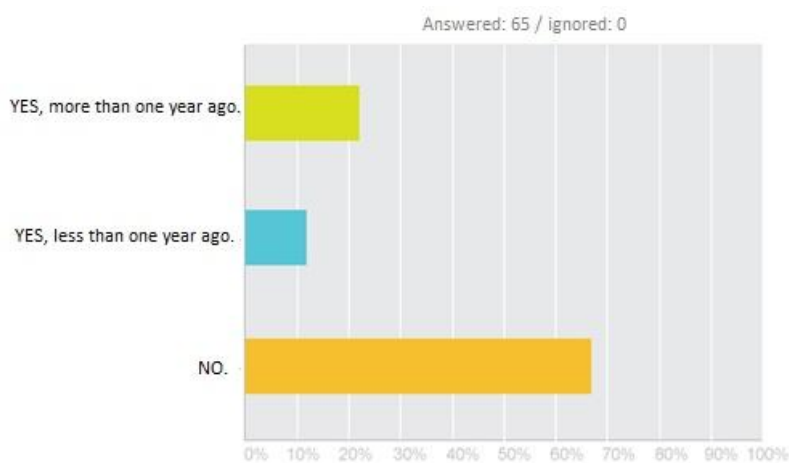Figure 2 shows that the institutions have not invested adequately in training for your employees.

Figure 2. Has any staffer from the sector taken part in any course on moving image collection treatment?
Source: The Authors.

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In Figure 3 it appears that just over 10% of the surveyed institutions do not know whether there is a disaster plan in place for its analog audiovisual collections, and a serious scenario is explicit: 70% of institutions do not have a disaster plan.
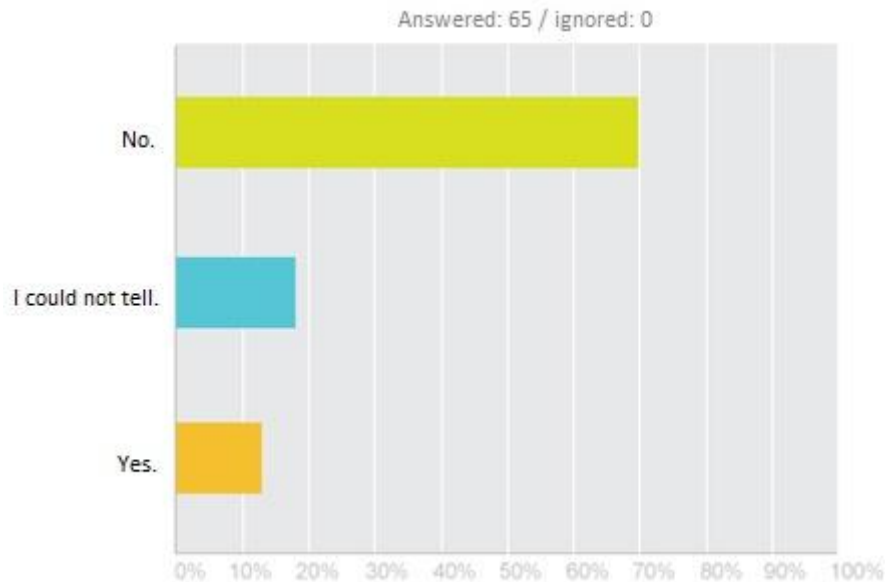

Figure 3. Does the institution have a disaster plan for the analog audiovisual documentation?
Source: The Authors.

Figure 4 reports only those institutions that have developed a collection digitization project, totalizing 29 institutions or institutions sectors (from 65 ones that answered our questionnaire). An aspect of extreme institutional oversight refers to the way the master versions of its digital audiovisual archives are stored: almost 50% of the institutions keep it exclusively on their computers' hard drives, just over 20% of them keep it on DVD, besides approximately 15% that do not even know where such master versions are stored. An absurdity. Only about 20% of the institutions that produce master versions of its audiovisual archives act carefully and following regulations, adopting the LTO (linear tape open) as media for their master versions of audiovisual documents.
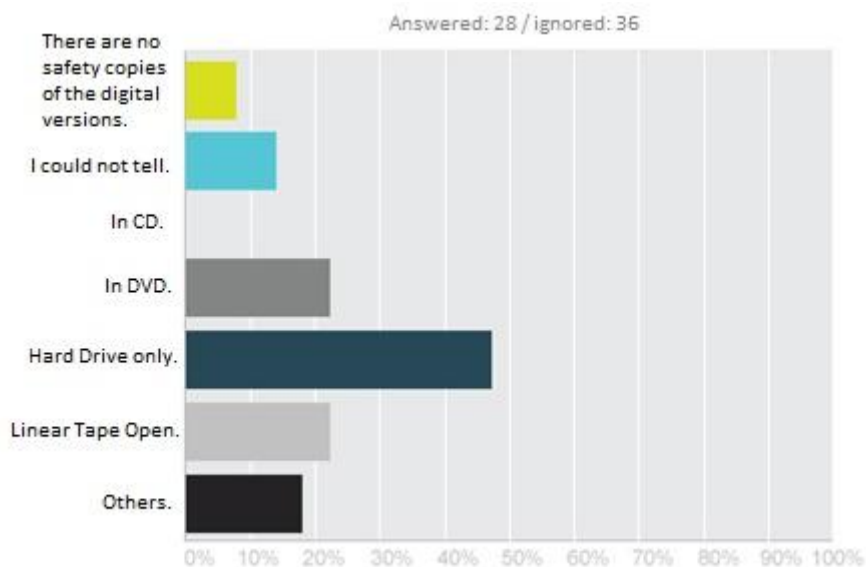
Figure 4. How is stored the safety copy of each item's bigger resolution version (master version)?
Source: The Authors

5.1.2 Data from Users

Regarding the users, we gathered data from fifteen (15) individuals, between April 15, 2014 and March 12, 2015, and it was only possible to start analyzing data in mid-July 2015. The exception here is that we will not analyze user data, only present it graphically. This analytical activity will continue in the last phase of the research, Phase 3 (2016-2019). The users who answered our questionnaire are from the following institutions:

Chart 2. Institutions from which users collaborated with the research
(answered the questionnaire)

Nº	Institutions from which there were answers from audiovisual collection users.
01	UFBA - Biblioteca Anísio Teixeira / Faculdade de Educação
02	UFBA - Biblioteca Djalma Ramos / Maternidade Climério de Oliveira
03	Fundação TV Minas Cultural e Educativa
04	UFBA - Escola Politécnica
05	Biblioteca Teixeira de Freitas
06	Arquivo Nacional
07	Museu da Imagem e do Som de Belo Horizonte (antigo Centro de Referência Audiovisual de Belo Horizonte)
08	Cinemateca Brasileira
09	Cinemateca Brasileira
10	Arquivo Público Mineiro
11	Arquivo Público da Cidade de Belo Horizonte
12	Prefeitura Municipal de Engenheiro Navarro
13	Arquivo Público Mineiro
14	Secretaria de Estado de Cultura de Minas Gerais
15	Museu da Imagem e do Som de Belo Horizonte (antigo Centro de Referência Audiovisual de Belo Horizonte)

Source: The Authors.

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The 15 respondents fall into the following professional categories: four librarians, one multimedia producer, one audiovisual producer/researcher, one filmmaker, one audiovisual manager, one audiovisual conservator, three historians, one of whom is also an archivist, one communication specialist, one collaborator who identified himself as a municipal official and another who identified himself as a state official. The average age among them is 40 years (between 25 and 56 years old), 60% of them being female individuals.

All have a computer and internet access in their homes, and only one user still uses dial-up connection. An interesting information is that, before going to the institutions, to consult moving image collections, 60% of respondents previously check whether the institution offers these images on their websites.

The most researched themes are the following:
- City history (73,33%);
- Inaugurations, reforms, services and public works (60%);
- Memory and museums (53.33%);
- Congresses, courses, debates, conferences, meetings, forums, round tables, lectures, seminars, symposia (53.33%);
- Biographies (53.33%);
- Theatre (46.67%);
- Interviews, testimonials (46.67%);
- Ceremonies, orders, speeches, tributes, visits, conventions, campaigns and official ceremonies (46.67%);
- Carnival (46.67%);
- Nature (40%);
- Cultural events (40%);
- Concerts, musicals, operas, shows and recitals (40%)

The least researched topics are the following:
- Circus (6.67%);
- Adventure (13.33%);
- Book Releases (13.33%);
- Dance/Ballet (13.33%);
- Cartoons (13.33%);
- Sci-Fi (13.33%);
- Infant (13.33%);
- Scientific events (20%);
- War (20%);
- Ethnic/religious manifestations (20%).

Two users indicated specific answers in the options 'Others':
- Cinema and television memory (6,67%);

- General documentaries on Minas Gerais (6,67%).

As for the themes 'Prisons' and 'Terror' there were no answers. The most common goals checked by the users were:

- Masters degree research (26,67%);
- Entertainment/curiosity (20%) and
- Film production (13,33%).

The following objectives were also indicated: undergraduate, specialization, doctorate and book production research, each with a 6.67% rate. Two respondents indicated the following objectives in "Others": "Research for new audiovisual works for TV, cinema and exhibition" (6.67%) and "[It is] Necessary to my professional activities, especially preservation" (6.67%).

When asked if they would request a copy of a moving image collection document, users responded as follows:

Table 1. User option about asking for copies of a moving image collection document

Answer options	Answer	
No	40,00%	6
Yes, in CD, if possible	13,33%	2
Yes, in DVD, if possible	26,67%	4
Yes, in VHS tape, if possible	0,00%	0
Yes, sent to me by email, if possible	20,00%	3
Yes, in a USB drive	20,00%	3
Other (specify)	13,33%	2
Total of respondents: 15		

n°	Other (specify)	Date
1	It would be good if there were codecs for	31/08/2014 16:04
2	HD	22/07/2014 11:10

Regarding file formats most requested by users, we gathered the following responses:
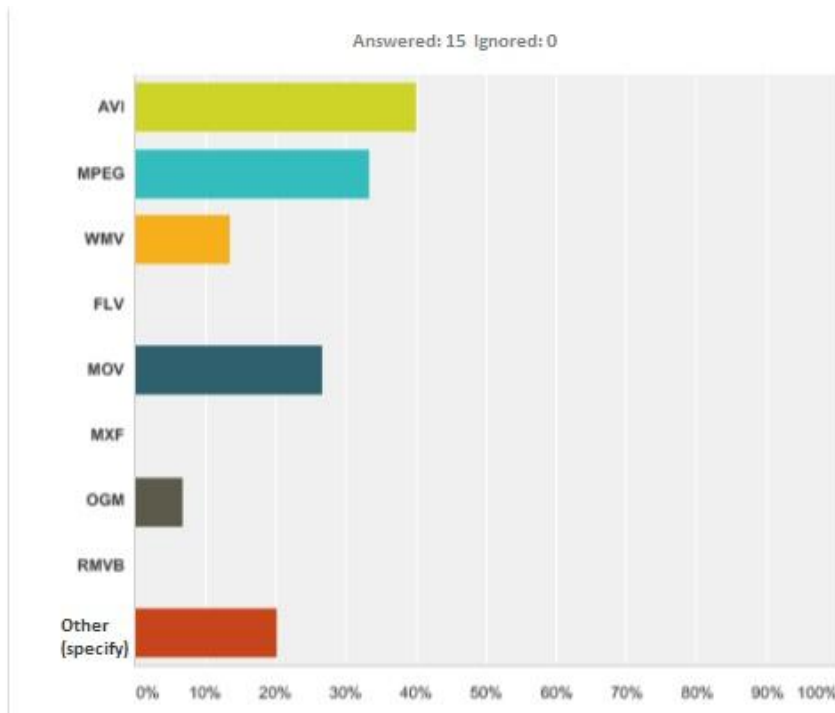
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Figure 5. In which format would you request the digital version of the audiovisual document?
Source: The Authors.

The option "Others", in Figure 5, were chosen by three users: "JPG"; "I do not know" and "We usually use the ones provided by the institution, we never requested a specific codec."

The figures presented above, regarding users, represent almost all[18] of the data collected from 15 individuals who collaborate to the research answering the questionnaire.

5.2 The LEGATUM Initiative

Before the end of the last century, preservation meant to retain, to keep. Today, it has been constituted as an area associated with access, forming a binomial in which preserving means sharing, disseminating. In the digital world, preservation and safeguarding become synonymous with continued access, as long as possible. Thus, providing access to the legacy recorded in the documents of permanent value, and identified as belonging to the society in which they were produced, is a determining factor of the present moment, which goes beyond the paradigm of handling restriction of the original, when preservation was the main objective.

In Brazil, from the use of the Internet in the 1990s, the public archival institutions[19] started to adopt requirements and standards formulated by the Technical Chamber of

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[18] This consolidated and integrated dataset can be accessed in <http://www.cridi.ici.ufba.br/respostas-2014-2015/Resumo-dados-individuais-2014-2015.pdf>.

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Electronics Documents of the National Council on Archives, and also based on international rules aimed at archival processing and digitization of documents on their custody, and to employ several actions that allow easy digital access to their collections, which include audiovisual and iconographic collections in its various forms. Several contents relating to these collections are available on the Internet, others, given the infrastructure and personnel difficulties faced by archival institutions, are awaiting opportunity to be digitalized and made available in access platforms.

Considering the conservation and access efforts in a global scale, any cooperation, integration and international reach initiative will find difficulties to be overcome among the participating countries. To try collaborative solutions can enable not only the scientific learning throughout the process, but the obtainment of one or more useful products to a group of countries with essentially similar characteristics (such as the Latin origin of their official languages), but at the same time, differentiated by the economic, cultural and social contexts.

The language similarities of Latin origin countries who are able to participate in the Legatum repository can manifest itself in different ways, some more obvious than others, such as the cultural similarities that were carried on by the common linguistic heritage. We understand, as a premise, that access, understanding and cultural identification among different peoples can occur despite the cultural and language barriers. That is the premise that we want to adopt with the development of the Legatum digital repository.

This Legatum initiative comes to be under the CRIDI Group project, from the action of its components. Its first and perhaps main action is to generate a research product that provides storage and continuously monitored preservation, that is, the Legatum archival repository.

The purpose of this repository is to gather data from audiovisual collections guarded by institutions of Latin culture countries, whose public archival institutions are custodians of these funds and collections in which these holdings are linked. For the research, we considered only the countries of the so-called third generation, which can be easily identified as those that have as official language: Portuguese, Spanish, Catalan, Galician, French, Italian and Romanian. The Occitan or Provençal languages, spoken at the south of the Loire river, in France, and the Romansh, spoken by about 35,000 people in the Grisons canton of Switzerland, were not included in this research phase, both because of the difficulty in achieving a complete translation of the interface and the limited amount of nowadays current speakers, however, there are plans to include these languages in the future.

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[19] Those that perform the management of collections produced by other public institutions of the same sphere of power, due to the activities of a governmental administration, having the archive as a core activity. Moreover, this type of institution normally stablishes services for the management and provision of the documentary collections in its care for the historical-cultural research and administrative support. See Mariz 2012.

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As a digital access platform, the Legatum repository has an installation of the second version of the free software AtoM (formerly ICA-AtoM), with the abovementioned languages active (the translation into Romanian created by the research group's own efforts), besides English.

The work that is now being undertaken counts with the collaboration of other institutions, groups, individuals and initiatives with which the CRIDI Group has established relations. In the group itself, efforts are being undertaken in Phase 3 (2016-2019) to migrate data from institutions and collections already available on the Internet to the repository, or to request such data directly from the institutions. Since the work has a comprehensive and broad spectrum potential, it is expected that this collaborative action will be an ally so that the objectives can be achieved.

Currently, members of the research group, specially the scholarship-students are participating in training for insertion of the said data and to thus make the criticism about the Legatum features.

Legatum[20] is an open repository model designed for the digital access of information regarding the public audiovisual collections and, into the future, with the potential to become a trusted archival repository for storing digital audiovisual masters. It is a series of actions coordinated around an open, multi-languages and collaborative repository. The repository is based on a digital access platform in accordance with archival standards in order to become as fit as possible to achieve the objectives it pursues. The activities already undertaken refer to tests and discussions on the multilevel archival description and interrelationship among software tables, changes in the interface for better visualization of the content, and consolidation of visual identity. Taking into account the experience and professional profile of some of the CRIDI Group members, and the studies in the existing literature, including the norms and the adaptation of the official translation into Portuguese, considering the Brazilian variety of this language, since there are many terms from the terminology of the European variant of Portuguese.

The expected result at the end of Phase 3 (2016-2019) refers to an environment for access and digital archival preservation, as well as the meeting and sharing of Latin culture audiovisual and iconographic collections descriptions. This platform should enable the perception of similarities and differences between the manifestations, diversities and cultural similarities of the traditions and archival practices, in addition to the increase of the exchange among peoples often geographically distant, but close through a common cultural heritage. The continuous idealization exercise of new forms of digital access of audiovisual documents will be favored by the accumulation of knowledge that the initiative should promote, document and disseminate.

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[20] See <http://www.cridi.ici.ufba.br/?page_id=489> and <http://www.legatum-si.net>.

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Our commitment is in the constant search for improvement in order to make the process increasingly directed to the users' information needs, and to contribute so that the use of digital technologies favors the good performance of the public institution in society. It is believed that in this way the institutions that keep such audiovisual collections are recognized as agents that enable, as part of the society we live in, the experience and the recognition of social memory and history as a means of individual consciousness expansion.

Below, the image of the first screen of the Legatum repository is presented in English, a language that is sustained as an initial door on the user interface, for being the current lingua franca (the contemporary "Latin").
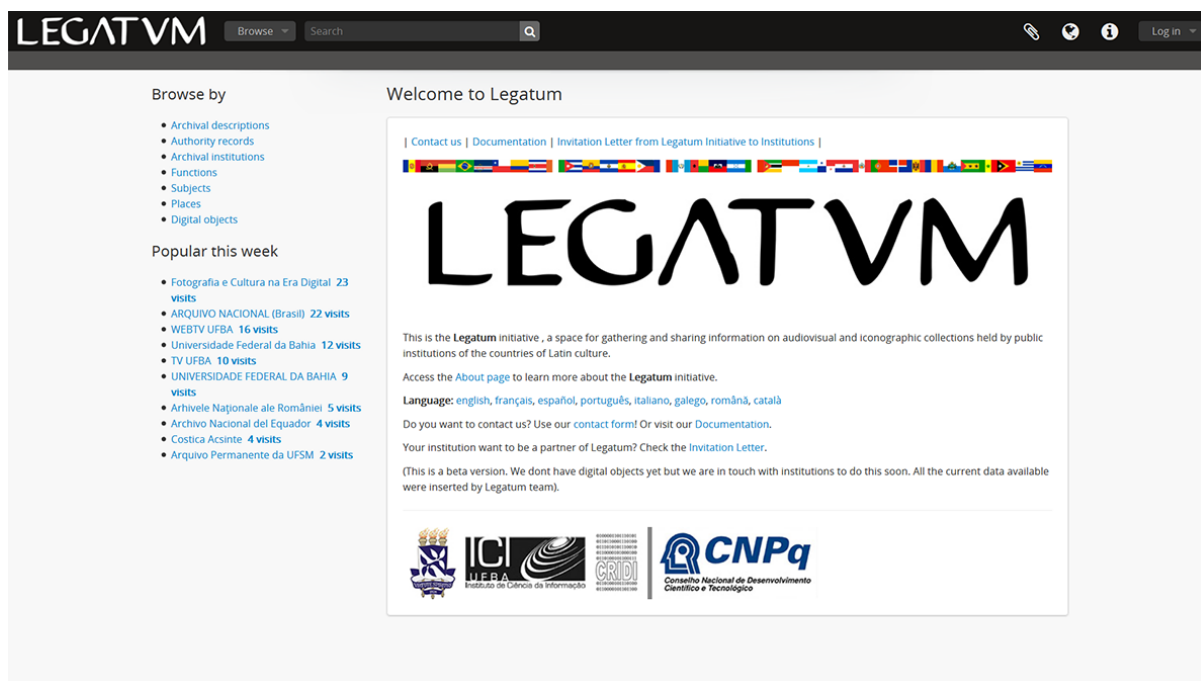

Figure 6. Legatum Initiative main screen

Source: The Authors

At first, as already mentioned, the Legatum repository should gather and disseminate digital representatives of archival audiovisual collections or funds produced or under custody in the public sphere of the countries that have as its official languages the aforementioned Latin origin ones. The goal is to identify and describe or to obtain the archival description of audiovisual collections guarded by institutions that store collections of such origin. The gathering of these elements allows a differentiated view of the available data in the Legatum favoring further studies and research in the area

The Legatum Initiative is a technical experience that uses the latest advances in information technology applied to the permanent collections, and foundations and

developments in digital preservation. But it is also an initiative of reflection about digital information, culture, and representation, that is, a step of empirical convergence at the same time providing an useful product to the researcher interested in accessing information about audiovisual collections.

The initial reason for the decision to confine the Legatum experience to seven languages of Latin origin was to make a comprehensive yet still manageable international scope. We initially considered the Portuguese-speaking world, but then considered that there would be no problems in extending to the languages of Latin root. It seems interesting to us the existence of an environment to show that there is something in common among countries of similar Latin origin language, even though they are on different continents, and even the Latin heritage is manifested sometimes only linguistically, as seemed to be the case of Romania when we started the project, but which held a proximity reality that proved encouraging in the context of culture, which highlights the perception that a language can reveal a lot about cultures. This initial decision on the linguistic level can be a rich ground for the development of future studies that not only have the archival aspect of the question, in which the social, economic and historical influences would be considered, among others[21]. We could use the English language for the data insertion from the beginning, but then we would have only one repository with linguistically leveled data. No doubt, it would be a good idea with the aim of providing an easier, more universal access, but there are other repositories that have these goals. The European Union, for example, has Europeana, the US has something within the project OCLC/Worldcat, among other examples. If, somehow, the implementation of Legatum is only possible if we adopt a single description language, we would have no trouble doing it, but we assume that the archival institutions with fewer resources will always find it easier to ingest data into its native language. On the other hand, we could have difficulties to follow the insertions if they were made in Farsi, Japanese, Vietnamese and the like, which created a barrier in this moment when we have no technological solution that could overcome this limit. The choice for Latin culture stems from the conviction that achieving a greater share of this universe is easier than if we choose "any country" as a requirement for participation.

Legatum, with the institutional support of the public sphere, can provide a reasonable technological cost solution and of low risk (although it requires a lot of convincing work with the institutions we want to see using the platform), while offering elements for theoretical reflection and operational practice, bringing together technical clarifications and even, we believe, incentive to the engagement also of future end-user of the platform. Currently in Phase 3, we are already doing the first movements for the adoption of a system specifically

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[21] In his developing doctoral thesis, the Archivist Ricardo Sodre Andrade, Master in Information Science and a member of the CRIDI group, has been working with the Portuguese-speaking world as a cultural and linguistic environment that maintains relations and differences between countries that are part of this scope. In this space, Andrade considers the approaches through the plurality of archival institutions and the sharing actions of their collections representations. The idea of a Latin culture repository follows the same idea.

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dedicated to the preservation metadata. Legatum will also incorporate the Archivematica[22], an (open source) system of digital preservation also recommended by the ICA and the National Archives of Brazil. In this action, we have the fundamental support of the Superintendence of Information Technology of the Federal University of Bahia (STI-UFBA). We also consider fundamental for the reflection and action around the Legatum, as well as to its diffusion, the support of the National Archives, the National Council on Archives (organs of the Ministry of Justice), the Brazilian Cinemateca (Ministry of Culture organ) and the Brazilian Institute of Information Science and Technology (IBICT, MCTI organ) through the Brazilian Network of Digital Preservation Services - Cariniana Network[23].

The expectation is that we have to act very actively to sensitize the institutions to adhere to the proposal. This is, perhaps, one of the greatest difficulties we are facing, as this type of collaborative action has not been very common among Brazilian archival institutions, especially regarding audiovisual collections, always with much specificity. This might be one of the most interesting originality aspect of the project: A paradigm shift in the inter-institutional relationship, which becomes remote, able to bring benefits and join efforts through a research group supported by CNPq.

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[22] See <https://ww.archivematica.org/en/>.
[23] See <http://cariniana.ibict.br/>.

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